GOVERNMENT OF INDIA
ATOMIC ENERGY
LOK SABHA

UNSTARRED QUESTION NO:123
ANSWERED ON:16.11.2016
LIGOIndia Project
Girri Shri Maheish

Will the Minister of ATOMIC ENERGY be pleased to state:

(a) the details regarding initiation of mega science LIGO-India project;

(b)whether the Government has identified locations to set up the same and if so, the details thereof;

(c)the methodology of participation of Indian researchers and scholars in the project; and

(d)the potential of contribution of this project to the scientific community in India?

Answer

THE MINISTER OF STATE FOR, PERSONNEL, PUBLIC GRIEVANCES AND PENSIONS AND PRIME MINISTER''S OFFICE (DR. JITENDRA SINGH):

(a)The Government has given in-principle approval for setting up Laser Interferometer Gravitational Wave Observatory (LIGO) in India. The LIGO-India project a state-of-the-art gravitational wave observatory on the Indian soil set up in collaboration with the LIGO Laboratory in the U.S. run by Caltech and MIT. The LIGO-India project is jointly coordinated and executed by four premier Indian lead institutions: the Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune, and three of the Department of Atomic Energy's research units − the Institute for Plasma Research (IPR), Gandhinagar the Raja Ramanna Centre for Advanced Technology (RRCAT), Indore and Directorate of Construction, Services and Estate Management (DCSEM). Alongwith some of the Universities in the Country..

(b)Yes, Sir. Site Selection Committee has identified two sites for setting up of LIGO-India. The two sites are Aundh, Hingoli District in Maharashtra and Kalyanpura, in Chittorgarh district of Rajasthan. At the preferred site Aundh, Hingoli District in Maharashtra, application for land acquisition has been filed with the State authorities. The marking of land is in progress.

(c)The LIGO-India Project is a jointly funded project by the Department of Atomic Energy (DAE) and Department of Science & Technology (DST), with DAE acting as lead agency for execution of the project. In construction phase the project will be executed by Raja Ramanna Centre for Advanced Technology (RRCAT), Indore, Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune, Institute for Plasma Research (IPR), Gandhinagar, and Directorate of Construction, Services and Estate Management (DCSEM), Mumbai. The researchers and scholars from these institutions will contribute directly to the Project. Researchers and scholars from other institutions will participate in the project by way of work packages in various fields of science and engineering that are needed to implement the project. After completion of the project, LIGO-India will be an international facility where researchers and scholars from India and abroad can participate in the scientific experiments.

(d)The project will motivate a large number of young, budding scientists in India to take up experimental physics and instrumentation related to LIGO as their career choice. The project will create trained manpower who can work on precision instrumentation, which will have potential applications in strategic sectors such as space and defence. All key components such as optics, lasers, isolation systems, low-noise electronics, high precision servo controls, etc., are at the forefront of their current technological limits. Taking up this project would generate expertise and know-how in these advanced areas of technology, which would benefit other technological domains such as high power lasers, high precision metrology, length and time reference standards, seismic isolation, and high-end precision control techniques

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